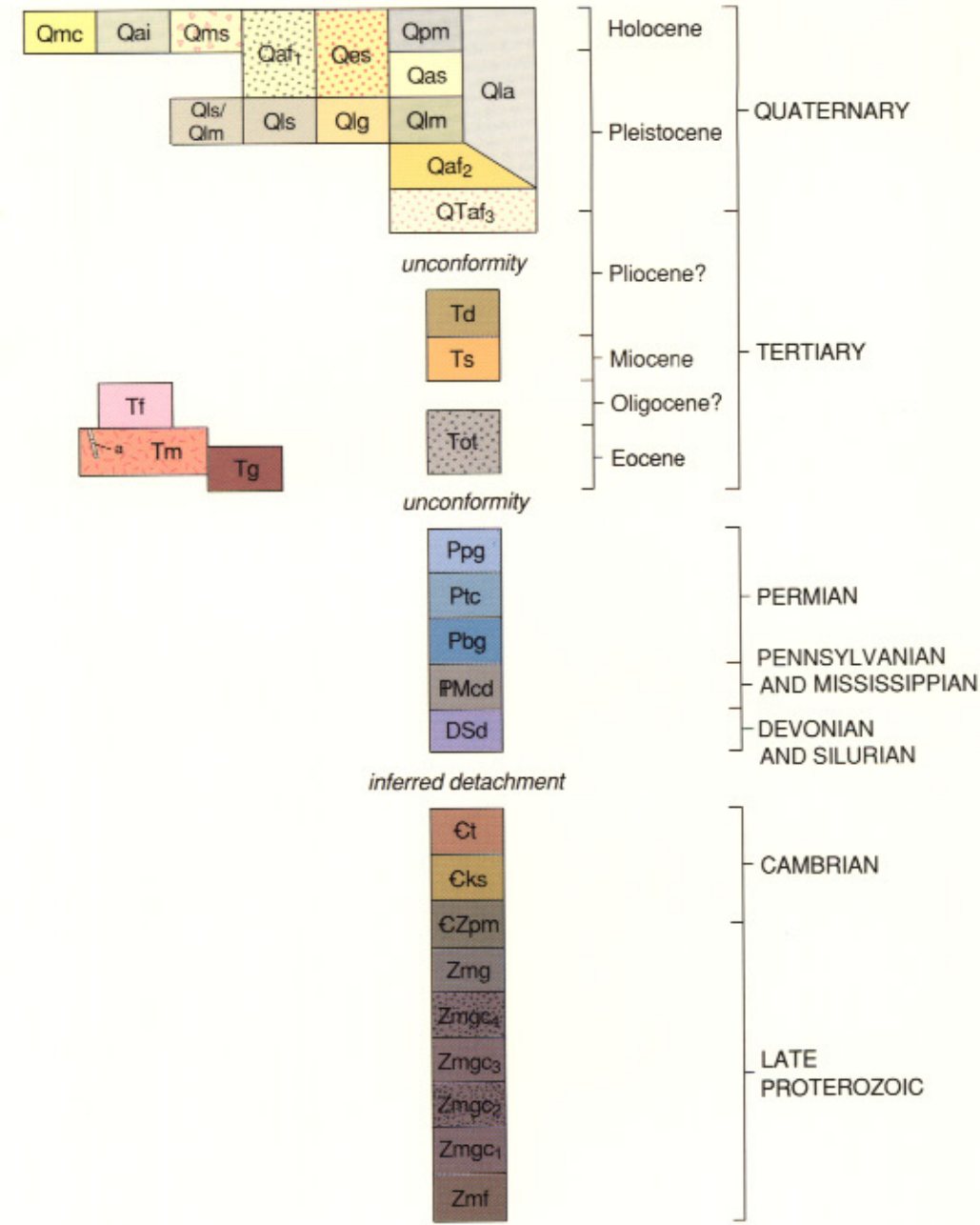




DESCRIPTION OF MAP UNITS

- Qmc** Colluvium and talus (Holocene)--Unconsolidated conglomerate, gravel, and sand slopewash deposits and blocky deposits on talus slopes.
- Qai** Alluvial silt (Holocene)--Thin sheets of unconsolidated, poorly sorted, brown silt with subordinate fine sand and clay. Deposited by streams and sheet floods along margins of Pilot Valley playa. Gradational into playa mud (Qpm), and interfingers with and is overlain by eolian sand (Qes).
- Qms** Landslide deposits (Holocene)--Displaced deposits of disaggregated rock and alluvium that form hummocky terranes.
- Qaf** Alluvial-fan deposits (Holocene and Pleistocene)--Unconsolidated stream and fan deposits of poorly sorted gravel, sand, and silt. Deposited as alluvial cones at mouths of canyons and gullies, as alluvial floodplains bordering streams, and as sediments in stream channels. Slopewash included locally.
- Qes** Eolian sand (Holocene and Pleistocene)--Unconsolidated tan and light-brown fine sand and silt forming sheets and complexes of small dunes less than 1.5 m (5 ft) in height. Deposits are extensive along Pilot Valley playa, where they interfinger with lacustrine, alluvial, and playa deposits. Primarily consists of reworked regressive sandy marl deposits of Lake Bonneville. Most dunes stabilized by vegetation.
- Qpm** Playa mud (Holocene)--Unconsolidated, white, tan, and gray carbonate mud, oolitic sand, and gypsum and halite evaporite deposits (Lines, 1979) underlying Pilot Valley playa. Includes deposits of white to tan mud and silt on small playas behind Lake Bonneville barrier beaches.
- Qla** Lacustrine and alluvial deposits, undivided (Holocene and Pleistocene)--Varied, complexly interlayered, pale-colored deposits of lacustrine and alluvial origins including gravel, sand, and silt. In most places, unit consists of thin sheets of alluvium on poorly exposed lacustrine deposits.
- Qas** Alluvial sand and silt (Pleistocene)--Red sand and silt beds deposited on lacustrine marl (Qlm) and overlain by shoreline sand (too thin to be mapped) deposited by the Gilbert stage of Lake Bonneville.
- Qls/Qlm** Lacustrine sand over lacustrine marl (Pleistocene)--Well-sorted, fine sand that overlies silty white marl.
- Qls** Lacustrine sand (Pleistocene)--Unconsolidated brown sand in sheets as much as 3 m (10 ft) thick. Most deposits are just below Bonneville shoreline and between the Provo and Stansbury shorelines.
- Qlg** Lacustrine gravel (Pleistocene)--Moderately to well-sorted pebble, cobble, and sand cemented by tufa. Interfingers with lacustrine sand (Qls). Locally includes poorly exposed underlying lacustrine sand or marl.
- Qlm** Lacustrine marl (Pleistocene)--White and buff, unconsolidated marl, clay, silt, and sand. In vicinity of gravel-bar complex extending from Pilot Range to Lemay Island, includes silty and sandy deltaic facies.
- Qaf₂** Older alluvial-fan deposits (Pleistocene)--Unconsolidated, poorly sorted gravel and sand forming piedmont flanking Pilot Range. Mostly stream and fan deposits; slopewash included locally. Overlain by deposits of Lake Bonneville.
- QTaf₃** Oldest alluvial-fan deposits (Pleistocene and Pliocene?)--Unconsolidated to partly consolidated, poorly sorted boulder, cobble, pebble, gravel, sand, and silt alluvial deposits forming raised terraces. Locally contains extensive pedogenic calcrete.
- Td** Diabase (Pliocene?)--Undivided reddish-brown, resistant diabase dikes and large nonresistant intrusive bodies that weather to soft, loose, brown soils. Generally fine-grained, hornblende-plagioclase mafic rock and pyroxene-plagioclase diabase. Diabase intrudes Miocene strata.
- Ts** Sedimentary rocks (Miocene)--Lithified, but generally nonresistant, green and brown fanglomerate; siliceous lake deposits such as conglomerate, sandstone, and siltstone; and limestone. Thin interbeds of white, altered, water-laid vitric tuff are included. Lake deposits are generally thin bedded and fine grained. Coarser rocks are mainly in lower part of section. Limestone is silty, dark brown, thin bedded. Marker unit of pebble conglomerate containing clasts of lined metaquartzite indicated by dot-dashed line.
- Tt** Felsite (Oligocene?)--Light-gray felsite containing sparse phenocrysts of subhedral quartz, plagioclase, and alkali feldspar. Most outcrops are of north-striking, steeply dipping dikes.
- Tot** Older tuff (Oligocene? and Eocene)--White, altered tuff, possible rhyolite flows, and interbedded sedimentary and volcanic rocks. Tuff has phenocrysts of plagioclase, quartz, biotite, and hornblende in chalky, siliceous to clayey matrix. Rare flow-banding and rounded quartz grains are present in flows. Sedimentary rocks mostly are sandstone and siltstone, thinly interbedded with ash-flow tuffs and conglomerate consisting of reworked tuff.
- Tm** McGinty Monzogranite (Eocene)--Coarse-grained, white to gray, porphyritic monzogranite to granodiorite. Phenocrysts of alkali feldspar are set in coarse-grained matrix of plagioclase, alkali feldspar, quartz, and biotite. Unit also includes pale-gray and cream-colored aplite dikes (a), commonly striking north and dipping steeply. Aplites in dikes commonly grades to pegmatite in borders or centers. The McGinty is considered latest Eocene in age.
- Tg** Granodiorite dikes (Eocene)--Light-gray, medium-grained, hornblende-biotite granodiorite with aphanitic to fine-grained matrix. Dikes vary in composition but are generally granodiorite.
- Ppg** Grandeur Formation of the Park City Group (Permian)--Interbedded light- and medium-gray, thin- to medium-bedded dolomite, chert, and sandstone. Quartz sandstone is fine grained, cemented by calcite, and commonly silicified and cherty; it typically weathers brown. Dolomite is sandy, well bedded, and rarely fossiliferous.
- Ptc** Trapper Creek Formation (Permian)--Thick-bedded, bioclastic limestone alternating with thin beds of silty limestone and dolomite, gray-brown dolomite, and clean gray limestone. Chert is sporadically present in limestone.
- Pbg** Badger Gulch Formation (Permian)--Laminated to thin-bedded, platy, dark-gray to black, silty limestone; less common laminae and thin beds of siltstone are browner than limestone. Some beds are bioclastic, typically containing crinoid fragments, spirifer brachiopods, and fusulinids.
- PMcd** Chainman Shale and Diamond Peak Formations, undivided (Pennsylvanian and Mississippian)--Dark-gray shale, and dark-gray, dark-brown, and black sandstone and conglomerate with quartz, chert, and feldspar clasts.
- DSd** Thick-bedded dolomite (Devonian and Silurian)--Off-white, light- and medium-gray, faintly bedded to structureless dolomite and calcareous dolomite.
- Ct** Toano Limestone (Cambrian)--Gray to tan, platy, laminated and thin-bedded limestone and phyllitic limestone with dolomite and siltstone partings. Lower part is dark gray, silt-rich, and gradational into the underlying Killian Springs Formation (Cks).
- Cks** Killian Springs Formation (Cambrian)--Dark-colored, graphitic phyllite. Lower part is homogeneous dark-gray, black, and dark-blue-gray graphitic phyllite, and upper part is dark-gray calcareous phyllite. Calcite content increases upward in upper part.
- CZpm** Prospect Mountain Quartzite (Cambrian and Late Proterozoic)--Light-colored, prominently bedded and cross-laminated quartzite forming massive cliffs.
- McCoy Creek Group of Misch and Hazzard, 1962 (Late Proterozoic)--Alternating phyllite and quartzite units. In this area, consists of:**
- Unit G--Divided into:
- Upper subunit--Dark phyllite and metasilstone with interbedded marble and quartzite.
- Conglomerate subunit--Divided into:
- Interval 4--Dark-gray to black conglomerate and coarse-grained quartzite.
- Interval 3--Dark-brown, rhythmically bedded phyllite and metasilstone forming gentle slopes.
- Interval 2--Light-gray, coarse-grained to conglomeratic quartzite forming steep cliffs; generally medium to thick bedded and cross laminated, brown weathering, and micaceous.
- Interval 1--Dark-brown, quartzose phyllite with interbeds of coarse quartzite and conglomerate. Quartzite is dark gray, brown, and light gray, impure and poorly size sorted. Conglomerate is polymict and contains phyllite rip-up wedges. Forms slopes with small cliffs.
- Zmf** Unit F--Gray, well-bedded and cross-laminated, cliff-forming quartzite. Lenticular conglomerate at top contains rip-up clasts of phyllite, boulders and cobbles of quartzite, and rare jasperoid clasts.
- UNITS SHOWN ONLY IN CROSS SECTION**
- Ptf** Third Fork Formation (Permian)--Calcareous, platy sandstone and arkose, and silty limestone.
- Oes** Ely Springs Dolomite (Ordovician)--Dark-gray to black, poorly bedded, fractured calcareous dolomite.
- Oe** Eureka Quartzite (Ordovician)--White and light-gray orthoquartzite.
- Ogc** Garden City Formation (Ordovician)--Thinly interbedded blue-gray limestone, gray and brown silty limestone, and brown calcareous siltstone.

CORRELATION OF MAP UNITS



MAP SYMBOLS

- CONTACT--Dotted where covered, dashed where gradational
- MARKER UNIT--Distinctive bed or unit within a map unit
- HIGH-ANGLE FAULT--Dashed where location inferred, dotted where concealed; bar and ball on downthrown side; dip indicated
- BEDDING-PLANE FAULT--Dashed where location inferred, dotted where concealed; barbs on hanging wall
- LOW-ANGLE NORMAL FAULT--Dashed where location inferred, dotted where concealed; barbs on hanging wall; dip indicated
- GRAVITY-SLIDE BLOCK--Dotted where concealed
- ORIENTATION OF BEDDING
- Inclined
 - Vertical
 - Overturned
- ORIENTATION OF FOLIATION
- Inclined
 - Vertical
- ORIENTATION OF FOLIATION AND BEDDING AT SAME OUTCROP
- LINEATION--Showing trend and plunge
- TRACE OF AXIAL SURFACE OF ANTICLINE
- TRACE OF AXIAL SURFACE OF SYNCLINE --Showing plunge
- STRIKE AND DIP OF IGNEOUS FEATURES--a, aplites; p, pegmatite dike
- LOCATION OF PALEONTOLOGY SAMPLE
- LOCATION OF GEOCHRONOLOGY SAMPLE
- BONNEVILLE SHORELINE
- PROVO SHORELINE
- STANSBURY SHORELINE
- PILOT VALLEY SHORELINE
- GILBERT SHORELINE

FORMATION			SYMBOL	THICKNESS feet (meters)	LITHOLOGY	
sedimentary rocks			Ts	3300 (1000)		
older tuff			Tot	1970 (600)		
Grandeur Formation			Ppg	1610 (490)		
Trapper Creek Formation			Ptc	660 (200)		
Badger Gulch Formation			Pbg	2400 (730)		
Chainman Shale and Diamond Peak Formations, undivided			PMcd	65 (20)		
Thick-bedded dolomite			DSd	1400 (425)		
Toano Limestone			Ct	1970 (600)		
Killian Springs Formation			Cks	330 (100)		
Prospect Mountain Quartzite			CZpm	2840 (865)		
McCoy Creek Group	Unit G	upper subunit	Zmg	1725 (525)		
		conglomerate subunit	interval 4	Zmg ₄		65 (20)
			interval 3	Zmg ₃		165 (50)
			interval 2	Zmg ₂		475 (145)
			interval 1	Zmg ₁		1310 (400)
	Unit F		Zmf	1400 (425)		

